

**MOBILE HYDRAULIC POSITION SENSORS
IN - CYLINDER APPLICATIONS**

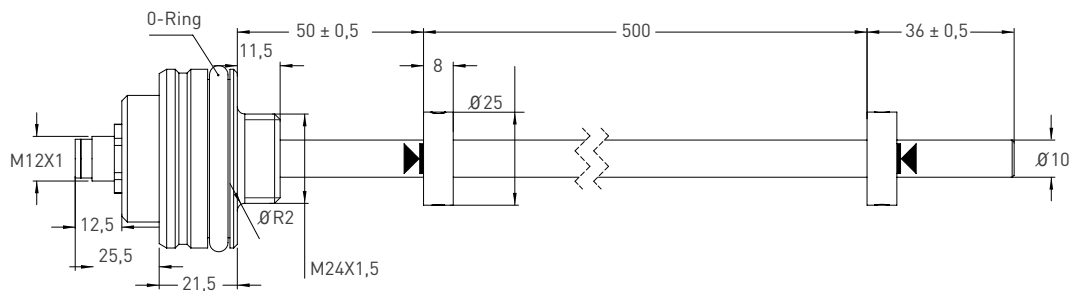


MSP

In-Hydraulic Non-Contact Magnetostrictive Position Sensor

- Measuring length 50 - 3000 mm
- 15 bit resolution

ANALOG V/mA



Technical Specifications

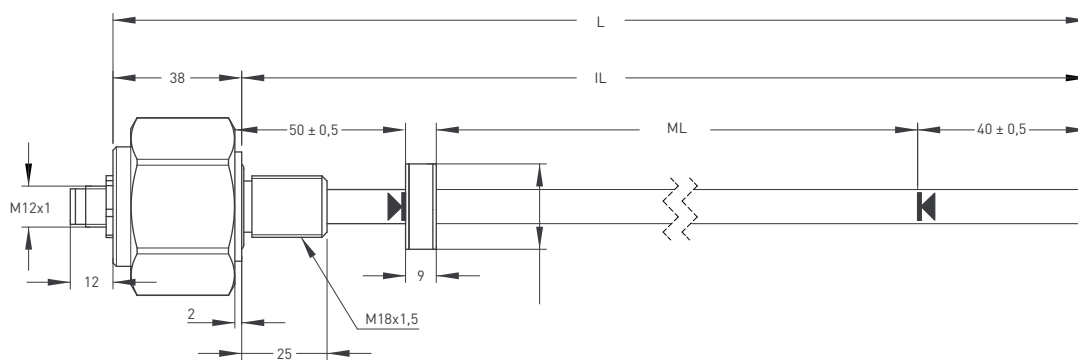
Measurement stroke	50 - 3000 mm
Resolution	15 bit
Linearity	± 0.05% full scale (min. 100 µm)
Repeatability	± 0.005% (full scale)
Output	0-20mA, 4-20mA
Power supply	24 VDC (22 - 26 V)
Displacement speed	<5 m/s
Vibration	EN 60068-2-6, 5-200 Hz 200 m/s ² (20g) , 2h 30 min. each axis (x,y,z)
Shock	EN 60068-2-2:2007 500m/s ² (50g), 11ms. (x, y, z axis)
Update time	50-600 mm, 0,5 ms 600-1500 mm, 1 ms 1500-3000 mm, 2ms
Max. consumption	50 mA - 90 mA (depening on stroke length)
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to 30 VDC
Pressure rating	<500 bar
Mounting	M18 x 1.5 or 3/4"-16 UNF O-Ring or Flat
Case material	Tube: Stainless stell
Protection level	IP 67
Operating temperature	-10°C ... +70°C
Storage temperature	-30°C ... +90°C

MSPF

Internal / External Mounting Hydraulic Cylinders Magnetostrictive Position Sensor

- Measuring length 50 - 3000 mm
- 15 bit resolution
- Single - double output options

ANALOG V/mA










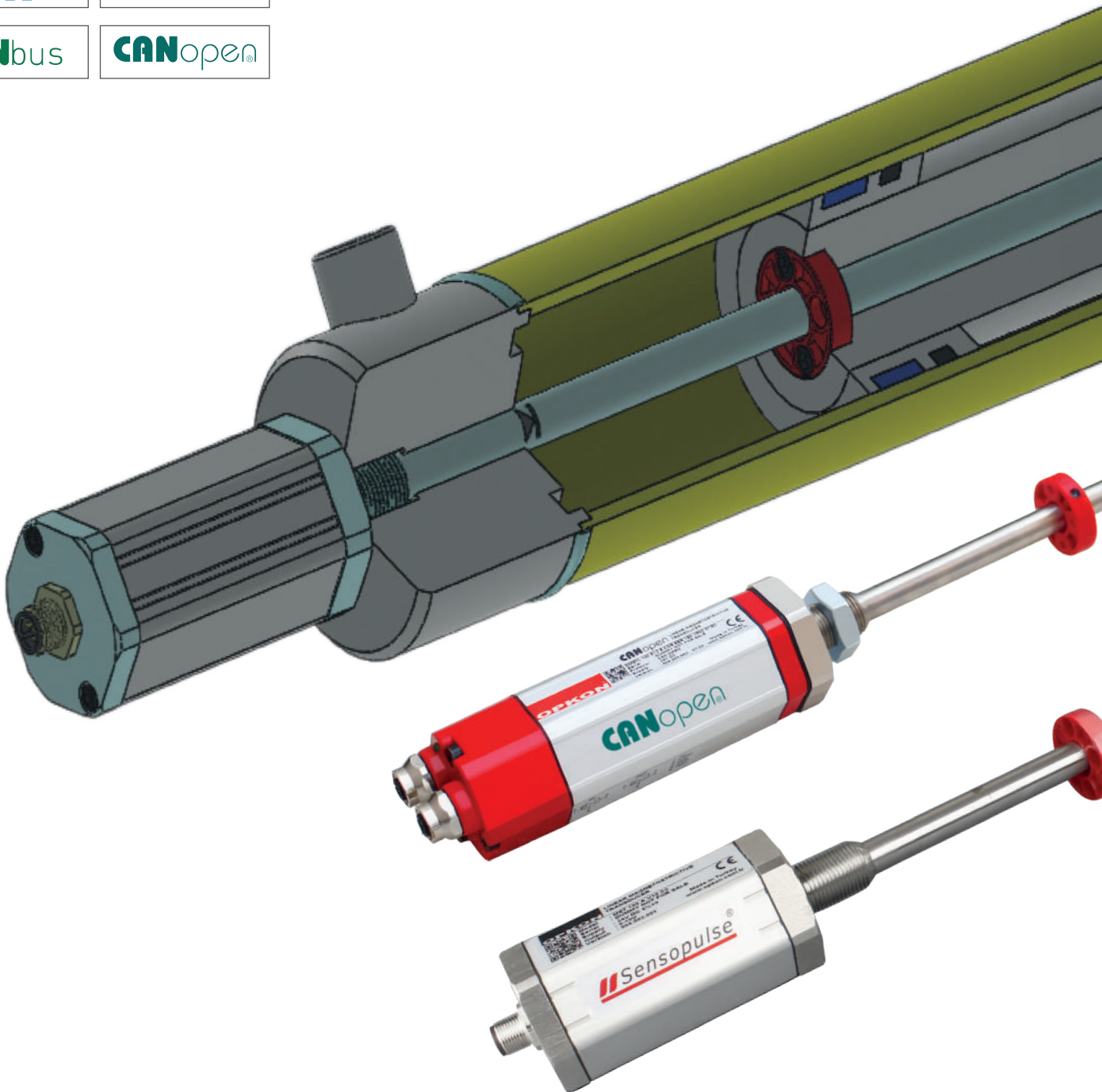
Technical Specifications

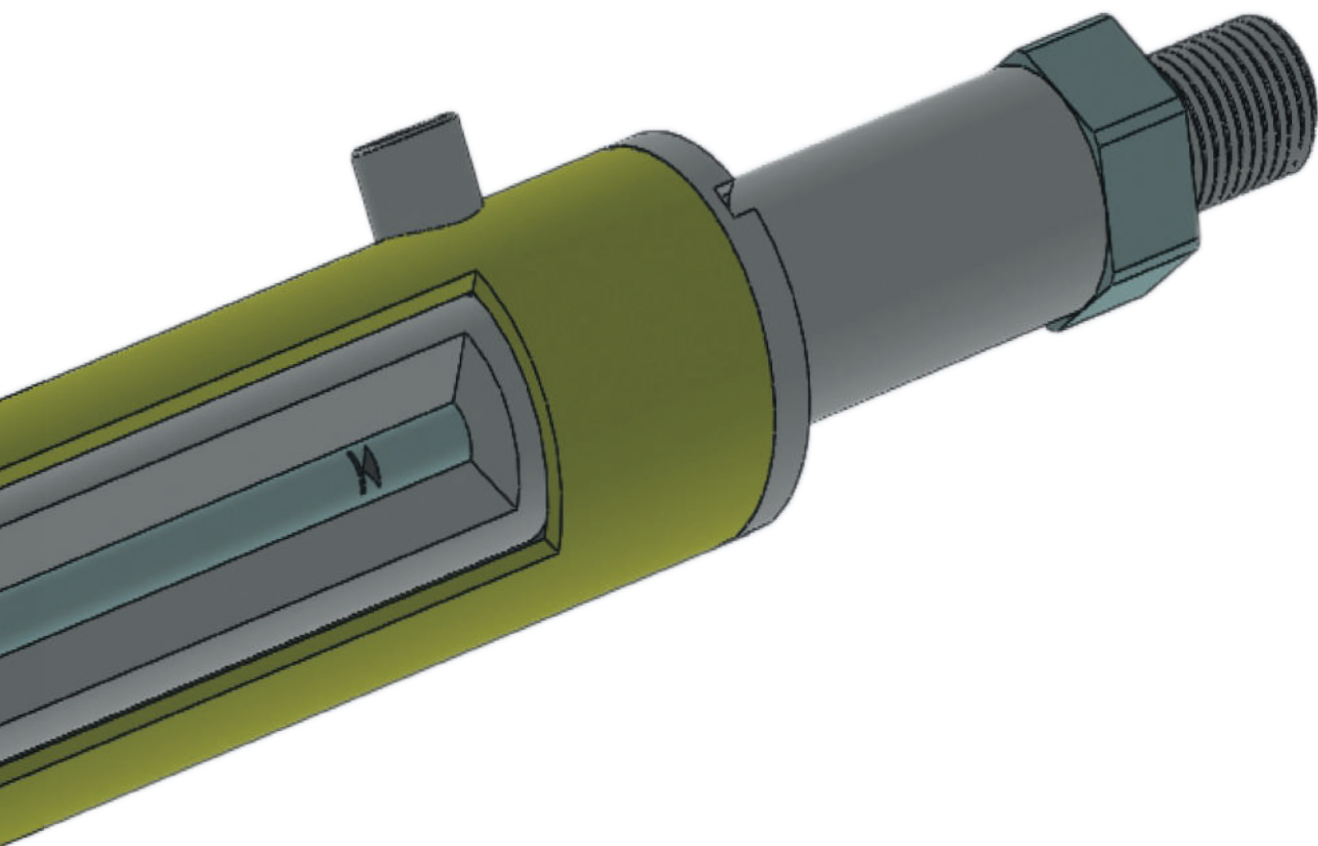
Measurement stroke	50 - 3000 mm
Resolution	15 bit DAC
Repeatability	±0,005% (full scale)
Output	0-20mA, 4-20mA
Power supply	24 VDC ±10%
Displacement speed	<5 m/s
Linearity	±0,05% full scale (min. 100 µm)
Sampling rate	Up to 2 kHz (depending on stroke length)
Vibration	EN 60068-2-6 , 5-200 Hz 200 m/s ² (20g) , 2h 30 min. each axis (x,y,z)
Shock	EN 60068-2-2:2007 500 m/s ² (50g), 11ms. (x,y,z axis)
Update time	(0-600mm, 0,5ms), (600-1500mm, 1ms), (1500-3000mm, 2ms)
Max. consumption	< 50 mA - 90 mA (depending on stroke length)
Load resistance	max. 500 Ohm
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Pressure rating	< 500 bar
Sealing	O-ring: NBR
Mechanical fixing	M18 x 1.5 or 3/4"-16 UNF O-ring
Case material	Case: Stainless steel, Tube: Stainless steel, Caps: Anodized aluminium
Protection level	IP 67
Operating temperature	-10°C ... +70°C
Storage temperature	-30°C ... +90°C

MST / DMST

In-Hydraulic Cylinders
Non-Contact Magnetostrictive
Position Measurement Sensors

ANALOG V/mA	
	
	
	





Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	15 bit
Linearity	± 0.05% full scale (min. 100 µm)
Repeatability	± 0,005% (full scale)
Analog output	0-10V, 0-20mA, 4-20mA
Digital output	EtherCAT, CANopen, CANbus, Modbus, Profibus, SSI, BISS
Power supply	24 VDC (22 - 26 V)
Displacement speed	<5 m/s
Vibration	EN 60068-2-6, 5-200 Hz 200 m/s ² [20g] , 2h 30 min each axis (x,y,z)
Shock	EN 60068-2-2:2007 500m/s ² [50g], 11ms. (x, y, z axis)
Update time	100-600 mm, 0,5 ms 601-1500 mm, 1 ms 1501-3000 mm, 2 ms 3001-5000 mm, 3 ms
Max. consumption	50 mA - 90 mA (depening on stroke length)
Reverse polarity protection	Up to -30 VDC
Overtoltage protection	Up to 30 VDC
Pressure raiting	<500 bar
Mounting	M18 x 1.5 or 3/4" -16 UNF O-Ring or Flat
Case material	Profile: Anodized aluminium Tube: Stainless steel Caps: Stainless steel
Protection level	IP 67
Operating temperature	-10°C ... +70°C
Storage temperature	-30°C ... +90°C

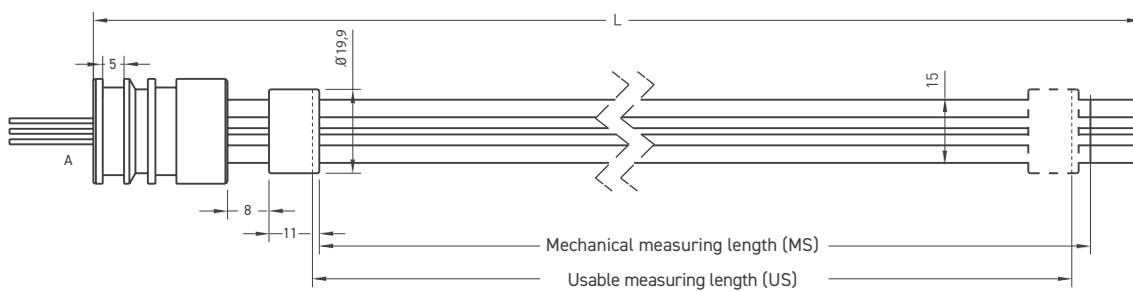
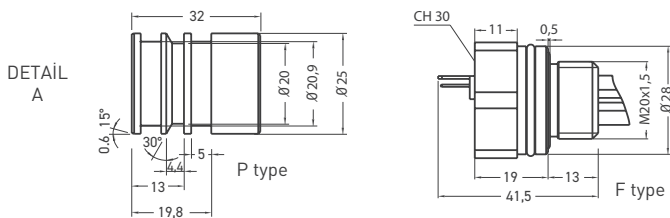
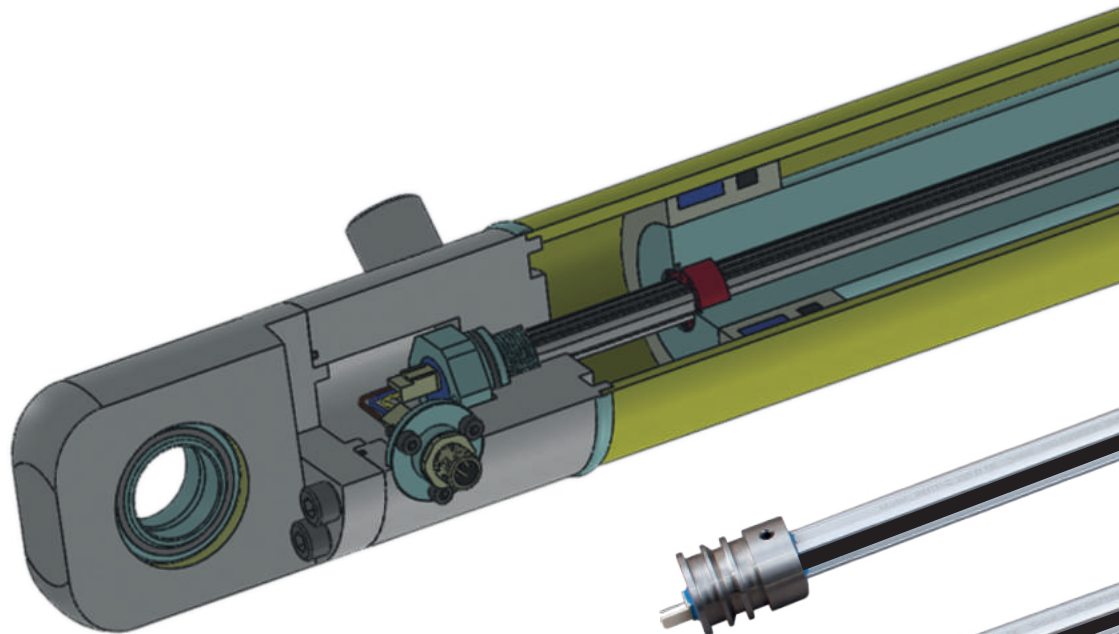
RHT-F/RHT-P

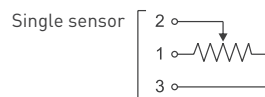
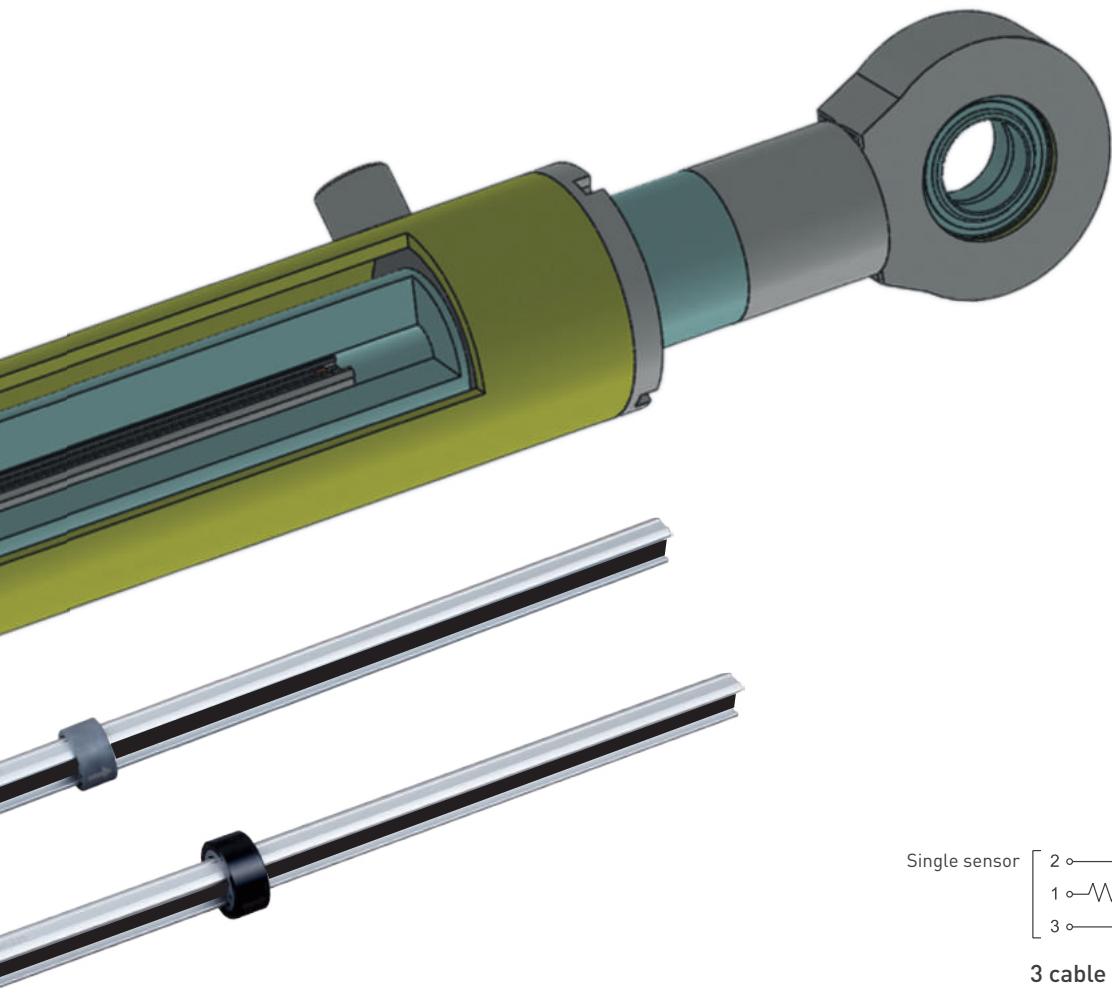
In-Hydraulic Cylinders Linear Potentiometers

- Measuring length 100 - 1000 mm
- Linearity \pm % 0,1
- Single sensor or double sensor for redundancy
- 20 million movements
- <0,01 mm repeatability
- 5 kOhm : 100 - 600 mm
- 10 kOhm : 650 - 1000 mm

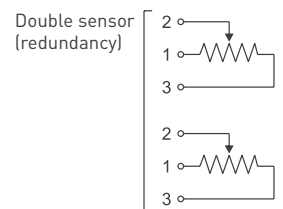
RESISTIVE
POTENTIOMETRIC

REDUNDANCY





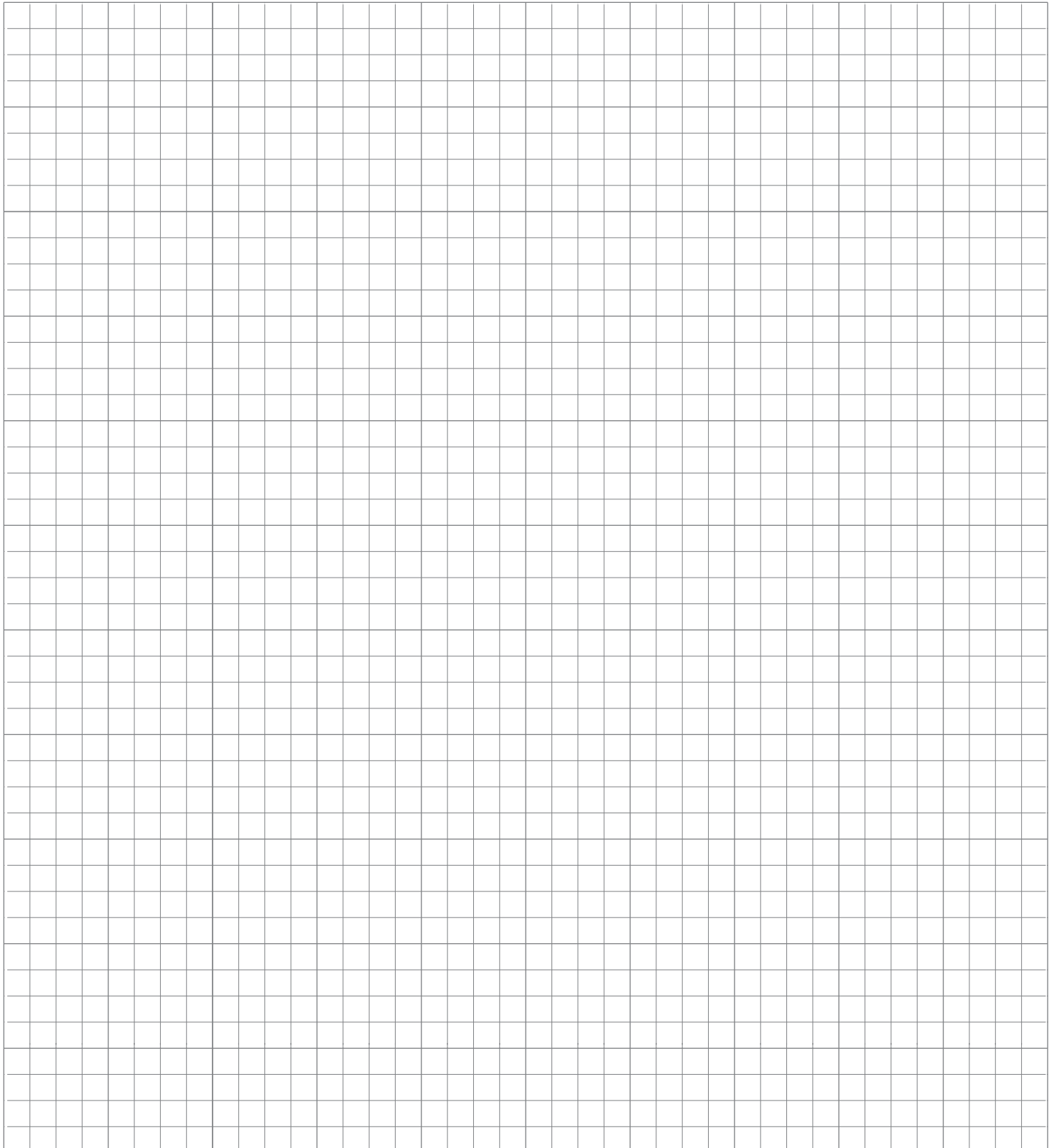
3 cable



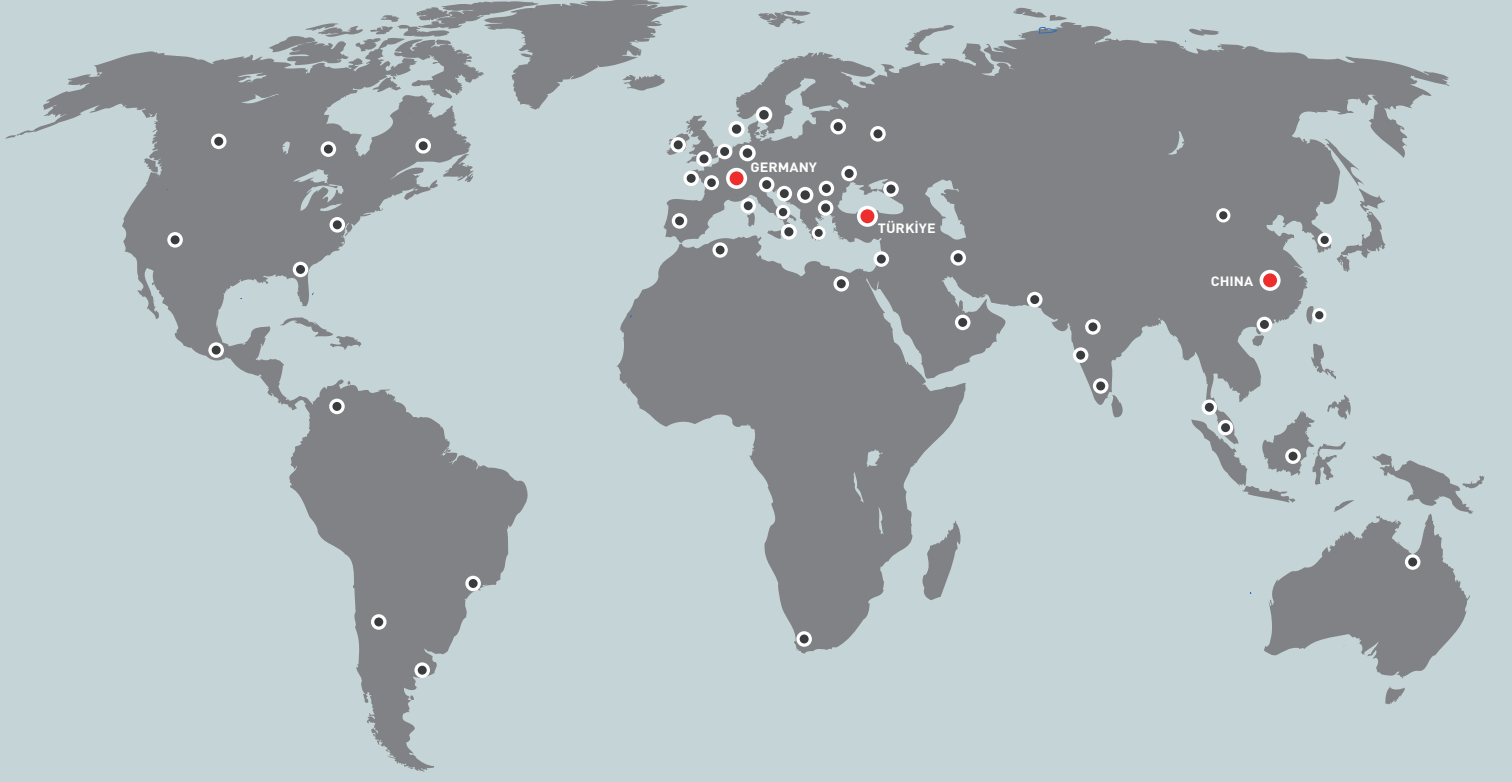
6 cable

Technical Specifications	
Measurement stroke	100 - 1000 mm
Linearity	± 0.1%
Repeatability	< 0.2 mm
Resolution	Infinite
Resistance	5 k0hm : 100 ... 600 mm 10 k0hm : 650 ... 1000 mm
Resistance tolerance	± 20%
Load resistor	100 k0hm min.
Recommended cursor current	< 1 µA
Power supply	28 VDC max.
Displacement speed	< 2 m/s
Mechanical life	> 20 million movements
Case dimensions	Ø15 mm
Case material	Anodized aluminium Stainless steel (AISI303)
Operating temperature	-20°C ... +80°C
Storage temperature	-30°C ... +90°C

NOTE :



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